

SPECIFY IN STATUTE ALL OF THE DESIGNATED BENEFICIAL USES OF NEW HAMPSHIRE SURFACE WATERS

SUMMARY

The federal Clean Water Act (CWA) requires states to develop and adopt surface water quality standards that include: designated uses for all surface waters; criteria to support the designated uses, and; an antidegradation policy. Together, RSA 485-A (mostly RSA 485-A:8-11) and DES rules Env-Wq 1700 comprise New Hampshire's surface water quality standards (WQS). New Hampshire's designated uses have broadly been included in statute and in administrative rules, however, they are not clearly delineated in either RSA 485-A or in Env-Wq 1700. The only place where the state's designated uses are explicitly listed is in the Consolidated Listing and Assessment Methodology (CALM), a guidance document published by DES every two years in association with the assessment of surface waters required by Clean Water Act section 305(b).

A designated uses, sometimes called a "beneficial uses", or "designated beneficial uses" are human uses of surface waters that are considered desirable and should be protected. The CWA requires states specify aquatic life and recreation as designated uses, but leave specification of others up to the states. Designated uses mentioned in the CWA include: public water supply; protection of fish, shellfish, and wildlife, recreation, and navigation. Others adopted by some states include fish and shellfish consumption, agriculture, industry, and aesthetic.

In this discussion paper, the Department of Environmental Services (DES) proposes to add statutory language to clearly identify and define the designated uses of our surface waters. This language will then be recommended to the House Resources, Recreation and Development Committee for incorporation into House Bill 1305 from the 2010 Legislative Session. If adopted, then the accompanying Administrative Rules: Env-Wq 1700 will need to be reviewed and amended as necessary and future editions of the CALM will also need to acknowledge the new legislative language and revised administrative rules.

It is recommended that the Designated Uses Working Group undertake the following tasks:

- 1) Review the CALM list of designated uses in light of the current statutory and rule language,
- 2) Review other states' designated uses;
- 3) Review and determine if "Geomorphic Integrity" should be added as a designated use in New Hampshire; and
- 4) Recommend designated uses for New Hampshire and statutory language that clearly lists and defines New Hampshire's designated uses.

APPLICABLE STATE and FEDERAL LAWS AND REGULATIONS

Federal - The Clean Water Act

§ 101(a)(2):

it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983;

§303(c)(2)(A):

Whenever the State revises or adopts a new standard, such revised or new standard shall be submitted to the Administrator. Such revised or new water quality standard shall consist of the designated uses of the navigable waters involved and the water quality criteria for such waters

based upon such uses. Such standards shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of this Act. Such standards shall be established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and also taking into consideration their use and value for navigation.

Federal Regulations, 40 CFR 131:

40 CFR 131.3 Definitions.

(e) Existing uses are those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards.

(f) Designated uses are those uses specified in water quality standards for each water body or segment whether or not they are being attained.

40 CFR 131.10 Designation of uses.

(a) Each State must specify appropriate water uses to be achieved and protected. The classification of the waters of the State must take into consideration the use and value of water for public water supplies, protection and propagation of fish, shellfish and wildlife, recreation in and on the water, agricultural, industrial, and other purposes including navigation. In no case shall a State adopt waste transport or waste assimilation as a designated use for any waters of the United States.

(b) In designating uses of a water body and the appropriate criteria for those uses, the State shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters.

(c) States may adopt sub-categories of a use and set the appropriate criteria to reflect varying needs of such sub-categories of uses, for instance, to differentiate between cold water and warm water fisheries.

(d) At a minimum, uses are deemed attainable if they can be achieved by the imposition of effluent limits required under sections 301(b) and 306 of the Act and cost-effective and reasonable best management practices for nonpoint source control.

(e) Prior to adding or removing any use, or establishing sub-categories of a use, the State shall provide notice and an opportunity for a public hearing under §131.20(b) of this regulation.

(f) States may adopt seasonal uses as an alternative to reclassifying a water body or segment thereof to uses requiring less stringent water quality criteria. If seasonal uses are adopted, water quality criteria should be adjusted to reflect the seasonal uses, however, such criteria shall not preclude the attainment and maintenance of a more protective use in another season.

State Statute: Water Pollution and Waste Disposal (RSA 485-A)

485-A:8 Standards for Classification of Surface Waters of the State. – It shall be the overall goal that all surface waters attain and maintain specified standards of water quality to achieve the purposes of the legislative classification. For purposes of classification there shall be 2 classes or grades of surface waters as follows:

I. Class A waters shall be of the highest quality and shall contain not more than either a

geometric mean based on at least 3 samples obtained over a 60-day period of 47 Escherichia coli per 100 milliliters, or greater than 153 Escherichia coli per 100 milliliters in any one sample; and for designated beach areas shall contain not more than a geometric mean based on at least 3 samples obtained over a 60-day period of 47 Escherichia coli per 100 milliliters, or 88 Escherichia coli per 100 milliliters in any one sample; unless naturally occurring. There shall be no discharge of any sewage or wastes into waters of this classification. The waters of this classification shall be considered as being potentially acceptable for water supply uses after adequate treatment.

II. Class B waters shall be of the second highest quality and shall have no objectionable physical characteristics, shall contain a dissolved oxygen content of at least 75 percent of saturation, and shall contain not more than either a geometric mean based on at least 3 samples obtained over a 60-day period of 126 Escherichia coli per 100 milliliters, or greater than 406 Escherichia coli per 100 milliliters in any one sample; and for designated beach areas shall contain not more than a geometric mean based on at least 3 samples obtained over a 60-day period of 47 Escherichia coli per 100 milliliters, or 88 Escherichia coli per 100 milliliters in any one sample; unless naturally occurring. There shall be no disposal of sewage or waste into said waters except those which have received adequate treatment to prevent the lowering of the biological, physical, chemical or bacteriological characteristics below those given above, nor shall such disposal of sewage or waste be inimical to aquatic life or to the maintenance of aquatic life in said receiving waters. The pH range for said waters shall be 6.5 to 8.0 except when due to natural causes. Any stream temperature increase associated with the discharge of treated sewage, waste or cooling water, water diversions, or releases shall not be such as to appreciably interfere with the uses assigned to this class. The waters of this classification shall be considered as being acceptable for fishing, swimming and other recreational purposes and, after adequate treatment, for use as water supplies. Where it is demonstrated to the satisfaction of the department that the class B criteria cannot reasonably be met in certain surface waters at all times as a result of combined sewer overflow events, temporary partial use areas shall be established by rules adopted under RSA 485-A:6, XI-c, which meet, as a minimum, the standards specified in paragraph III.

V. Tidal waters utilized for swimming purposes shall contain not more than either a geometric mean based on at least 3 samples obtained over a 60-day period of 35 enterococci per 100 milliliters, or 104 enterococci per 100 milliliters in any one sample, unless naturally occurring. Those tidal waters used for growing or taking of shellfish for human consumption shall, in addition to the foregoing requirements, be in accordance with the criteria recommended under the National Shellfish Program Manual of Operation, United States Department of Food and Drug Administration.

NH Surface Water Quality Regulations, Env-Wq 1700

Env-Wq 1702.23 "Existing uses" means those uses, other than assimilation or waste transport, which actually occurred in the waterbody on or after November 28, 1975, whether or not they are included in the water quality standards.

Env-Wq 1702.17 "Designated uses" means those uses specified in water quality standards for each waterbody or segment whether or not such uses are presently occurring.

Env-Wq 1702.52 "Water quality standards" means the combination of designated uses of surface waters, and the water quality criteria for such surface waters based upon such uses.

NH Guidance – the Consolidated Listing and Assessment Methodology (CALM)

Table 3-4: Designated Uses for New Hampshire Surface Waters

Designated Use	DES Definition	Applicable Surface Waters	Statutory Authority
Aquatic Life	Waters that provide suitable chemical and physical conditions for supporting a balanced, integrated and adaptive community of aquatic organisms.	All surface waters	CWA § 101(a)(2) “protection and propagation of fish, shellfish, and wildlife” RSA 485-A:8,II “nor...be inimical to aquatic life”
Fish Consumption	Waters that support fish free from contamination at levels that pose a human health risk to consumers.	All surface waters	RSA 485-A:8,II “acceptable for fishing”
Shellfish Consumption	Waters that support a population of shellfish free from toxicants and pathogens that could pose a human health risk to consumers	All tidal surface waters	RSA 485-A:8,V “growing or taking of shellfish for human consumption”
Drinking Water Supply After Adequate Treatment	Waters that with adequate treatment will be suitable for human intake and meet state/federal drinking water regulations.	All surface waters	RSA 485-A:8,I “water supply uses” RSA 485-A:8, II “use as water supplies”
Primary Contact Recreation (i.e. swimming)	Waters suitable for recreational uses that require or are likely to result in full body contact and/or incidental ingestion of water	All surface waters	CWA § 101(a)(2) “provides for recreation” RSA 485-A:8,II “acceptable for...swimming” RSA 485-A:8,V “utilized for swimming”
Secondary Contact Recreation	Waters that support recreational uses that involve minor contact with the water.	All surface waters	RSA 485-A:8,II “acceptable for... other recreational purposes”
Wildlife	Waters that provide suitable physical and chemical conditions in the water and the riparian corridor to support wildlife as well as aquatic life.	All surface waters	CWA § 101(a)(2) “protection and propagation of fish, shellfish, and wildlife” RSA 485-A:8,II “nor...be inimical to aquatic life”

Other states' designated uses

Information regarding Vermont, Maine and Massachusetts designated uses in statutes and regulations are presented below for review and consideration by the Working Group. EPA maintains a website for state WQS at <http://www.epa.gov/waterscience/standards/wqslibrary/>

VERMONT

Vermont defines “Designated Use” to mean: any value or use, whether presently occurring or not, that is specified in the management objectives for each class of water as set forth in 3-02(A), 3-03(A), and 3-04(A) of these rules.

Vermont Water Quality Standards

Vt. Code R. 12 004 052

Section 3-02 Class A(1) Ecological Waters***A. Management Objectives***

Managed to achieve and maintain waters in a natural condition, compatible with the following designated uses:

- 1. Aquatic Biota, Wildlife, and Aquatic Habitat*** - consistent with waters in their natural condition.
- 2. Aesthetics*** - water character, flows, water level, bed and channel characteristics, and flowing and falling waters in their natural condition.
- 3. Swimming and Other Primary Contact Recreation*** - highest quality in waters, in their natural condition with negligible risk of illness or injury from conditions that are a result of human activities.
- 4. Boating, Fishing, and Other Recreational Uses*** - highest quality as compatible with waters in their natural condition.

Section 3-03 Class A(2) Public Water Supplies***A. Management Objectives***

Water managed for public water supply purposes to achieve and maintain waters with a uniformly excellent character and a level of water quality that is compatible with the following designated uses:

- 1. Aquatic Biota, Wildlife, and Aquatic Habitat*** - high quality aquatic biota and wildlife sustained by high quality aquatic habitat necessary to support their life-cycle and reproductive requirements.
- 2. Aesthetics*** - water character, flows, water level, and bed and channel characteristics consistently exhibiting aesthetic value.
- 3. Swimming and other primary contact recreation*** - in waters that pose negligible risk of illness due to conditions that are a result of human activities, but managed as necessary for consistency with use as a public water supply.
- 4. Boating, Fishing, and Other Recreational Uses*** - suitable for good quality boating, fishing, and other recreational uses.
- 5. Public Water Supplies*** - highly suited as a source for public water supply with disinfection, and filtration when necessary.

Section 3-04 Class B Waters***A. Management Objectives***

Class B waters shall be managed to achieve and maintain a level of quality that fully supports the following designated uses:

- 1. Aquatic Biota, Wildlife, and Aquatic Habitat*** - aquatic biota and wildlife sustained by high quality aquatic habitat with additional protection in those waters where these uses were sustainable at a higher level based on Water Management Type designation.
- 2. Aesthetics*** - water character, flows, water level, bed and channel characteristics, exhibiting good aesthetic value and, where attainable, excellent aesthetic value based on Water Management Type designation.

3. Public water supply - Suitable for use as a source for a public water supply with filtration and disinfection.

4. Irrigation of crops and other agricultural uses - suitable, without treatment, for irrigation of crops used for human consumption without cooking and suitable for other agricultural uses.

5. Swimming and other primary contact recreation - suitable for swimming and other forms of water based recreation where sustained direct contact with the water occurs and, where attainable, suitable for these uses at very low risk of illness based on Water Management Type designation.

6. Boating, fishing and other recreational uses - Suitable for these uses with additional protection in those waters where these uses are sustainable at a higher level based on Water Management Type designation.

Vermont's Water Quality Standards, in their entirety, are available at:
<http://www.nrb.state.vt.us/wrp/publications/wqs.pdf>

MAINE

A definition for "Designated Use" was not identified in the Maine statutes.

The State of Maine has four classes for freshwater rivers, three classes for marine and estuarine waters, and one class for lakes and ponds. A close comparison of the standards will show that there is actually not much difference between the uses or the qualities of the various classes. All attain the minimum fishable-swimmable standards established in the federal Clean Water Act. Most support the same set of designated uses with some modest variations in their description.

Maine's Water Quality Classifications and Designated Uses:

Riverine Waters:

Class AA	Drinking water supply, recreation in and on the water, fishing, navigation and a natural and free flowing habitat for fish and other aquatic life.
Class A	Drinking water supply, recreation in and on the water, fishing, industrial process and cooling water supply, hydroelectric power generation, navigation and a natural habitat for fish and other aquatic life.
Class B	Drinking water supply, recreation in and on the water, fishing, industrial process and cooling water supply, hydroelectric power generation, navigation and an unimpaired habitat for fish and other aquatic life.
Class C	Drinking water supply, recreation in and on the water, fishing, industrial process and cooling water supply, hydroelectric power generation, navigation and a habitat for fish and other aquatic life.

Lakes and Ponds:

Class GPA	The sole classification for all lakes and ponds is class GPA. There may be no new direct discharges of pollutants into these waters. Thus, all class GPA waters are protected for the same designated uses which are drinking water supply, recreation in and on the water, fishing, industrial process and cooling water supply, hydroelectric power generation and a natural habitat for fish and other aquatic life.
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Estuarine and Marine Waters:

Class SA	Recreation in and on the water, fishing aquaculture, propagation and harvesting of shellfish, navigation and a natural and free flowing habitat for fish and other estuarine and marine life.
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Class SB Recreation in and on the water, fishing aquaculture, propagation and harvesting of shellfish, navigation and an unimpaired habitat for fish and other estuarine and marine life.

Class SC Recreation in and on the water, fishing aquaculture, propagation and harvesting of shellfish, navigation and a habitat for fish and other estuarine and marine life.

Maine's Water Classification Program, (per Maine state statute) which includes information pertaining to designated uses of each class is available at:

<http://www.mainelegislature.org/legis/statutes/38/title38sec464.html>

An explanation of Maine's surface water classifications and links to related Maine statutes are available at: <http://www.maine.gov/dep/blwq/docmonitoring/classification/index.htm>

MASSACHUSETTS

Massachusetts defines "Designated Use" to mean: those uses specified in 314 CMR 4.05 and 314 CMR 4.06 for each water class, whether or not they are being attained. Excerpts from 314 CMR 4.05 and 314 CMR 4.06 are provided below, however the classes and all of their criteria, are available on pages 8-19 of this document: <http://www.mass.gov/dep/service/regulations/314cmr04.pdf>

314 CMR 4.00: MASSACHUSETTS SURFACE WATER QUALITY STANDARDS

(1) Classes and Uses. The surface waters of the Commonwealth shall be segmented and each segment assigned to one of the Classes listed in 314 CMR 4.05(3) and (4). Each class is identified by the most sensitive, and therefore governing, water uses to be achieved and protected. Surface waters may be suitable for other beneficial uses, but shall be regulated by the Department to protect and enhance the existing and designated uses.

In accordance with 314 CMR 4.03(4), the Department may designate a partial use subcategory for these Classes. A partial use designation may be appropriate where waters are impacted by combined sewer overflows or stormwater discharges. Partial use is described in 314 CMR 4.06(1)(d)11.

(3) Inland Water Classes.

(a) Class A. These waters include waters designated as a source of public water supply and their tributaries. They are designated as excellent habitat for fish, other aquatic life and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation, even if not allowed. These waters shall have excellent aesthetic value. These waters are protected as Outstanding Resource Waters

(b) Class B. These waters are designated as a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. Where designated in 314 CMR 4.06, they shall be suitable as a source of public water supply with appropriate treatment ("Treated Water Supply"). Class B waters shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. These waters shall have consistently good aesthetic value.

(c) Class C. These waters are designated as a habitat for fish, other aquatic life and wildlife, including for their reproduction, migration, growth and other critical functions, and for secondary contact recreation. These waters shall be suitable for the irrigation of crops used for consumption after cooking and for compatible industrial cooling and process uses. These waters shall have good aesthetic value.

(4) Coastal and Marine Classes

(a) Class SA. These waters are designated as an excellent habitat for fish, other aquatic life and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. In certain waters, excellent habitat for fish, other aquatic life and wildlife may include, but is not limited to, seagrass. Where designated in the tables to 314 CMR 4.00 for shellfishing, these waters shall be suitable for shellfish harvesting without depuration (Approved and Conditionally Approved Shellfish Areas). These waters shall have excellent aesthetic value.

(b) Class SB. These waters are designated as a habitat for fish, other aquatic life and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. In certain waters, habitat for fish, other aquatic life and wildlife may include, but is not limited to, seagrass. Where designated in the tables to 314 CMR 4.00 for shellfishing, these waters shall be suitable for

shellfish harvesting with depuration (Restricted and Conditionally Restricted Shellfish Areas). These waters shall have consistently good aesthetic value.

(c) Class SC. These waters are designated as a habitat for fish, other aquatic life and wildlife, including for their reproduction, migration, growth and other critical functions, and for secondary contact recreation. They shall also be suitable for certain industrial cooling and process uses. These waters shall have good aesthetic value.

DISCUSSION

In HB 1305, DES proposed to explicitly assign designated uses to NH surface waters to clarify what they are and better align New Hampshire law with the requirements of the federal CWA. One of the reasons to clearly identify designated uses is that it makes federal funding programs for surface water quality issues, such as the 319 nonpoint source program, easier to access because the statutory language is closer to federal Clean Water Act language.

NH, together with other New England states, had adopted a surface water classification prior to the CWA. The system uses letter classes (Class A and Class B). Different classes do not necessarily mean different designated uses, because the classification system predates the CWA. In general, the CALM has interpreted that designated uses apply to all surface waters, regardless of whether they are legislative class A or class B.

A new designated use is proposed in HB 1305. The “geomorphic integrity” designated use, which has previously been considered to be part of the aquatic life use, has now been broken out as a separate designated use to better integrate surface water quality standards with the new Fluvial Erosion Hazard Program, and to facilitate access to federal funds for identified fluvial erosion hazards and other fluvial geomorphic issues, including, for example, river access to floodplains and watershed storage during high flow events.

HB 1305 proposed to change RSA 485-A: 8 to read as follows:

Explanation: Matter added to current law appears in ***bold italics***.

Matter removed from current law appears ~~[in brackets and struck through]~~.

Matter which is either (a) all new or (b) repealed and reenacted appears in regular type.

Standards for Classification of Surface Waters of the State. Amend the introductory paragraph of RSA 485-A:8 to read as follows:

485-A:8 Standards for Classification of Surface Waters of the State. It shall be the overall goal that all surface waters attain and maintain specified standards of water quality to ~~[achieve]~~ ***support*** the ~~[purposes of the legislative classification]~~ ***beneficial uses designated in RSA 485-A:9-a, I***. For purposes of classification there shall be 2 classes or grades of surface waters as follows:

New Sections; Designated Beneficial Uses; Antidegradation Requirements. Amend RSA 485-A by inserting after section 9 the following new sections:

485-A:9-a Designated Beneficial Uses. The following beneficial uses shall apply to all classes of surface waters:

I. Support of aquatic life, including a balanced, integrated, and adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of similar natural habitats of the region;

II. Recreation in and on the water, including, where applicable, swimming, wading, boating of all types, fishing, surfing, and similar activities;

III. Fish and shellfish for consumption;

IV. Drinking water supply after adequate treatment;

V. Water-oriented wildlife, including, but not limited to, waterfowl, shore birds, beaver, mink, moose, and otter;

VI. Geomorphic integrity, including suitable physical conditions in surface waters, adjacent shorelands, and riparian zones to provide floodwater attenuation and storage and maintain natural processes of erosion and sedimentation.

HB 1305, in its entirety, is available at: <http://www.gencourt.state.nh.us/legislation/2010/HB1305.html>

It is recommended that the Designated Uses Working Group undertake the following tasks:

- 1) Review the CALM list of designated uses in light of the current statutory and rule language,
- 2) Review other states' designated uses;
- 3) Review and determine if "Geomorphic Integrity" should be added as a designated use in New Hampshire; and
- 4) Recommend designated uses for New Hampshire and statutory language that clearly lists and defines New Hampshire's designated uses.

The proposed changes to RSA 485-A:8 from the 2010 legislative session will be the starting point for discussions.